

Amendments to the Abstract:

Please add the following text as the abstract of the application being filed concurrently herewith.

ABSTRACT OF THE DISCLOSURE

The present disclosure provides a rotaxane compound that can be used to separate molecules within a linkage layer formed on a solid substrate of a biochip by a predetermined distance. The compound is represented by Formula 1, in which a compound of Formula 3 vertically passes through a cavity of cucurbituril or its derivative of Formula 2. It further provides gene chips, protein chips and sensors for biomaterial assays which use the rotaxane molecules to allow biomaterials to be immobilized on a linkage layer such that they are regularly spaced apart from each other by a predetermined distance.